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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR <sup>1</sup>	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,137	05/21/2002	Elmar Mock	P56687	9497

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EXAMINER

GOODWIN, JEANNE M

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/070,137

Applicant(s)

MOCK ET AL.

Examiner

Jeanne-Marguerite Goodwin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 1942.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 14 objected to because of the following informalities:
  - a. In claim 35, line 2: "said oscillator" lacks antecedent basis;
  - b. In claim 36, line 3: "said collet" lacks antecedent basis

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12-38 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,402,368 to Grimm et al. [hereinafter Grimm] in view of US Patent 4,215,532 to Perrot.

**Regarding claims 12:** Grimm discloses a time indicator comprising a movement element (15) and discloses a a flying tourbillon module (2) shown but not labeled as such (Fig. 2), said flying tourbillon module being visible from a dial side of said movement element (Fig. 1), wherein said flying tourbillon module comprises an independent element relative to said time indicator (Fig. 1), said flying tourbillon module is capable of being removably separable as said flying tourbillon module from the movement element via a rear side of the said time indicator. Furthermore, there are barrels (springs) placed between the back of

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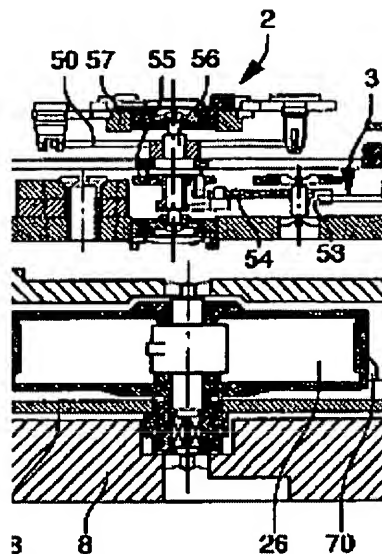
the watch, so the tourbillon cannot be removed unless the barrels are first taken out which would then allow the tourbillon to removably separable via the rear side. Grimm discloses a device as stated above with regards to claim 12. Grimm discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 12, i.e., a cantilvered bearing.

Perrot teaches a balance/collet assembly comprising a bearing (2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the bearing of Perrot, to the balance/collet assembly, as taught by Grimm, in order to be detachable from the remainder of the movement, as already suggested by Perrot.

**With respect to claims 24, 26-34, 37:** the method steps will be met during the normal assembly/disassembly of the apparatus stated above in claim 12.

**Regarding claim 13:** Grimm discloses a time indicator of claim 12, said flying tourbillon module comprising a balance bridge (57), a collet (see figure below) forming a cage with said balance bridge and a balance (49) disposed in said cage between the collet and said balance bridge (Fig. 2 and col. 4, lines 11-25).



**Regarding claim 14:** Grimm discloses a device as stated above with regards to claim 13. Grimm discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 14, i.e., a bearing means comprising a single ball bearing.

Perrot teaches a balance/collet assembly comprising a single bearing (2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the bearing of Perrot, to the balance/collet assembly, as taught by Grimm, in order to be detachable from the remainder of the movement, as already suggested by Perrot.

**Regarding claim 15:** Grimm further discloses a shaft on which the balance is mounted and the shaft having an end. Grimm discloses a device as stated above with regards to claim 13. Grimm discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 15, i.e., a bearing means comprising a bearing positioned a distance from an end of the shaft at a level of a center of gravity.

Perrot teaches a balance/collet/shaft assembly comprising a bearing means comprising a bearing (2) positioned a distance from an end of a shaft at a level of a center of gravity (Fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the bearing of Perrot, to the balance/collet/shaft assembly, as taught by Grimm, in order to be detachable from the remainder of the movement, as already suggested by Perrot.

**Regarding claim 16:** It appears that Grimm illustrates a time indicator of claim 13, wherein the collet has a diameter greater than a diameter of any other element so as to define a space requirement in a plane of the time indicator.

**Regarding claim 17:** Grimm discloses a time indicator of claim 13, wherein the balance is arranged eccentrically within the cage.

**Regarding claims 18:** Grimm further discloses a shaft/pinion set (pinion-cannon), a tourbillon bridge on which the collet is disposed on which the balance is mounted and the shaft having an end (see figure above) wherein in all form an integral unit supporting regulatory elements of the time indicator. Grimm discloses a device as stated above with regards to claim 13. Grimm discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 18, i.e., a bearing means.

Perrot teaches a balance/collet/shaft assembly comprising a bearing means comprising a bearing (2) positioned a distance from an end of a shaft at a level of a center of gravity (Fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the bearing of Perrot, by the balance/collet/shaft assembly,

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as taught by Grimm, in order to be detachable from the remainder of the movement, as already suggested by Perrot.

**With respect to claim 25:** the method steps will be met during the normal assembly/disassembly of the apparatus stated above in claim 18.

**Regarding claim 19:** Grimm further discloses a shaft having an end. Grimm discloses a device as stated above with regards to claim 17. Grimm discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 19, i.e., a bearing means.

Perrot teaches an oscillating shaft/bearing assembly comprising a bearing means comprising a bearing (2) positioned between a plane of the end of the oscillating shaft and a plane of a center of gravity (Fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to replace the shaft assembly of Grimm, by the oscillating shaft/bearing assembly, as taught by Perrot, in order to be detachable from the remainder of the movement, as already suggested by Perrot.

**Regarding claim 20:** Grimm's balance bridge further serves a second hand. Grimm is silent on the particular material used for the balance bridge. The particular type of balance bridge material, absent any criticality, is only considered to be the use of a "preferred" balance bridge material out of a plurality of well known balance bridge materials commonly used that a person having ordinary skill in the art at the time the invention was made would have find obvious to provide using routine experimentation based, among other things, on the intended use of applicant's apparatus, i.e., suitability for the intended use of applicant's apparatus. See In re

Leshin, 125 USPQ 416 (CCPA 1960) where the court stated that a selection of a material on the basis of suitability for the intended use of an apparatus would be entirely obvious.

**Regarding claim 21:** Official Notice is taken with respect the balance bridge carrying at least one of precious stones, precious metals and ornaments since it is very well known in the tourbillon art to use as such. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the balance bridge of Grimm, by making the balance bridge carry at least one of precious stones, precious metals or ornaments, to have a better manufacturing and assembly operation as well as increase functional advantages.

**Regarding claim 22:** Grimm discloses a time indicator of claim 12, wherein said flying tourbillon module is positioned in a plane of a dial of the time indicator and is visible from the dial side of the time indicator in one of a six o'clock and a twelve o'clock position (Fig. 8).

**Regarding claim 23:** Grimm discloses a time indicator of claim 12, said time indicator including a dial, said flying tourbillon module being positioned in said movement element in a raised manner relative to said dial (Fig. 8).

**Regarding claim 38:** Grimm discloses a time indicator with a balance spring (50) comprising a movement (15), a flying tourbillon module (2), said flying tourbillon module comprising comprising a balance bridge a collet forming a cage with said balance bridge; a shaft a balance mounted on said shaft disposed in said cage between said collet and said balance bridge, a regulator; and a cannon whereto said cage is attached to, wherein said flying tourbillon module is visible from a dial side of said movement; wherein said flying tourbillon module is designed as an independent element relative to said time indicator, and said flying tourbillon module is separable as said flying tourbillon module from said movement element via



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a rear side of the time indicator. Furthermore, there are barrels (springs) placed between the back of the watch, so the tourbillon cannot be removed unless the barrels are first taken out which would then allow the tourbillon to removably separable via the rear side. Grimm discloses a device as stated above with regards to claim 38. Grimm discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 38, i.e., a cantilvered bearing.

Perrot teaches a balance/collet assembly comprising a bearing (2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the bearing of Perrot, to the balance/collet assembly, as taught by Grimm, in order to be detachable from the remainder of the movement, as already suggested by Perrot.

**Regarding claim 39:** Official Notice is taken with respect the shaft comprising anti-shock units since it is very well known in the timepiece art to use such. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the shaft of Grimm, by making it anit-shock to the increase functional advantages.

**Regarding claim 40:** Official Notice is taken with respect pallet assembly since it is very well known in the timepiece art to use such. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the pallet assemblyto Grimm's device to the increase functional advantages.

**Regarding claim 41:** Official Notice is taken with respect pallet assembly since it is very well known in the timepiece art to use such. Therefore, it would have been obvious to a

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person having ordinary skill in the art at the time the invention was made to add the pallet assembly to Grimm's device to increase functional advantages.

**Regarding claim 42:** Grimm discloses a device as stated above with regards to claim 38. Grimm discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 42, i.e., a bearing means comprising a single ball bearing.

Perrot teaches a balance/collet assembly comprising a single bearing (2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the bearing of Perrot, to the balance/collet assembly, as taught by Grimm, in order to be detachable from the remainder of the movement, as already suggested by Perrot.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 12-42 have been considered but are moot in view of the new ground(s) of rejection.

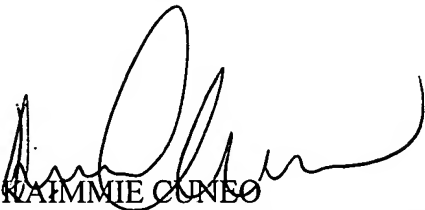
### ***Conclusion***

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Examiner Jeanne-Marguerite Goodwin whose telephone number is (571) 272-2104. The examiner can normally be reached on Monday-Friday (9am-6pm), alternate Fridays off. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this

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application or proceeding should be directed to the receptionist whose telephone number is (571)  
272-2861.

JMG  
July 24, 2006



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